

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/124, 925	07/29/98	ASHIZAWA	K

IM22/0601

EXAMINER	
DOVE, T	

JONES TULLAR & COOPER
P O BOX 2266 EADS STATION
ARLINGTON VA 22202

ART UNIT	PAPER NUMBER
1745	

DATE MAILED: 06/01/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/124,925	Applicant(s) Ashizawa et al.
	Examiner Tracy Dove	Group Art Unit 1745

Responsive to communication(s) filed on 7 Mar 2000.

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

Claim(s) 1, 2, and 4 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

Claim(s) _____ is/are allowed.

Claim(s) 1, 2, and 4 is/are rejected.

Claim(s) _____ is/are objected to.

Claims _____ are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on _____ is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

This Office Action is in response to the communication filed on 3/7/00. Applicant's arguments have been considered, but are not convincing. Claims 1, 2 and 4 remain rejected in view of the prior art of record. This Action is made **FINAL, as necessitated by amendment.**

Specification

The amendment filed 3/7/00 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the insertion of "or irregular" on page 3, line 19.

Applicant is required to cancel the new matter in the reply to this Office action.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 1, 2 and 4 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The term "non-regular" has been added to claim 1 by amendment, the term "non-regular" is not described in the specification. It is unclear what "non-regular" encompasses.

Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: it is unclear how a concavo-convex roll converts the metal foil without holes into a metal foil with penetrated holes. Concavo-convex rolls generally pleat or corrugate the metal foil, but do not punch holes into the foil. They can create indentations into the foil, but how the penetrated holes are formed in Applicant's invention as claimed is unclear. Specifically, the claims do not state how the metal foil without holes is converted into a metal foil with penetrated holes. Additionally, it is unclear how the penetrated holes conform to the equation of claim 1.

The term "given pressure" in claim 4 is a relative term which renders the claim indefinite.

The term "given pressure" is not defined by the claim, the specification does not provide a

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standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear what "given pressure" encompasses. Examiner suggests amending the claims to state "under a pressure".

To the extent that the claims are understood in view of the above rejections under 35 U.S.C. 112, please note the following art rejections.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins et al. 5,578,398.

Jenkins et al. discloses in col. 1, lines 22-37 that pressing out the burrs of a substrate material is conventional in the art. A metal substrate material is punched through one side to create perforations in the substrate through one side. Jenkins is directed toward a perforated substrate and the method of making the substrate. The perforations are formed by a punching apparatus. Perforation shapes other than circular shapes are also useful with the punching apparatus to provide a suitably perforated substrate.

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Jenkins does not explicitly state that the perforated holes have a non-regular shape or that concavo-convex rollers form the perforations.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide perforated holes having a non-regular shape because it is suggested by Jenkins that shapes other than circular shapes are useful. Furthermore, when the punching apparatus perforates the substrate, a ragged edge results. Once the burrs are smoothed out, one of skill would know that a perfectly circular shape does not result. A generally circular shape may result, but it will still have a slightly jagged edge.

As for the use of the concavo-convex rollers, it is still unclear how these rollers form the penetrating holes of the instant invention. See rejection under 35 U.S.C. 112 above.

Response to Arguments

Applicant's arguments with respect to claims 1, 2 and 4 have been considered but are moot in view of the new ground(s) of rejection.

Specifically, applicant argues that the Yanagihara reference does not teach the newly added limitation of the penetrating holes being without burrs. Using smoothing rollers to deburr the perforations in the substrate is known in the art. See Jenkins.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

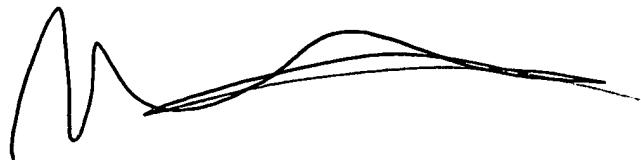
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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tracy Dove whose telephone number is (703) 308-8821. The Examiner may normally be reached *Monday-Thursday from 8:00 AM - 6:30 PM*. My supervisor M. Nuzzolillo can be reached at (703) 305-3776. The Art Unit receptionist can be reached at (703) 308-0661 and the official fax number is (703) 305-3599.

May 30, 2000

Maria Nuzzolillo
Supervisory Patent Examiner
Technology Center 1700

A handwritten signature in black ink, appearing to read "Maria Nuzzolillo", is positioned below the typed name and title. The signature is fluid and cursive, with a prominent initial 'M' and 'N'.